“CLOSING THE GAP”

ADDRESSING THE DISPARITY OF INFANT MORTALITY AMONG AFRICAN-AMERICAN AND WHITE INFANTS: APPROACHES FOR CLINICIANS AND POLICYMAKERS

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FINAL REPORT OF THE EXPERT PANEL ON AFRICAN-AMERICAN/WHITE INFANT MORTALITY GAP

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Table of Contents

Executive Summary with Recommendations and Action Steps 8

Introduction 14

Problem Statement 14

Rec. #1 Preconceptional Health Risks and Chronic Maternal Conditions 20

    1a: Chronic Maternal Conditions 20

    1b: Perinatal Infections 22

Rec. #2 Psychosocial and Behavioral Risks 25

    a. Smoking, Alcohol Consumption and Substance Abuse during Pregnancy 25

    b. Psychosocial Risks and Unintended Pregnancy 26

    c. Domestic Violence During Pregnancy 27

    d. Comprehensive Prenatal Care 28

Rec. #3 Community-based Service Models for Expectant Families 31

Rec. #4 Regionalized Perinatal Care Systems 34

    4a: Access to High Risk Care 34

    4b: Inclusion of Psychosocial Risks 35

Conclusion 38

Action Steps/Recommendations 38

February, 1998

Dear Friends:

Children are our future and we must recognize the wisdom in investing in their health and well-being. This year, I announced the *Children First* Campaign which will focus on making sure that all children are well-educated and healthy. The priorities of children will be reflected in all of our policy decisions. We are committed to seizing the moment and putting in place programs and policies that will support the healthy development of all of our children. In recent months, I launched Project Immunization, a massive campaign to increase the number of fully immunized children across the State. I have asked the General Assembly to join me in supporting expansion of health insurance coverage to uninsured pregnant women and young children. I have also launched an initiative to promote better reading habits among children by encouraging them to read more books and pledging to improve school libraries.

Maryland has made considerable progress in reducing its overall infant mortality steadily since 1995. In fact, the State had a record low infant mortality rate of 8.4 deaths per 1000 live births in 1996. However, there remains a significant gap in the number of African-American and White infant deaths. African-American infants are more than two times likely to die within the first year of life. The State's overall child well-being will not improve unless we work harder to make sure that every child is born healthy and that every child reaches his first birthday.

My Administration has made investigating the issue of racial disparity in infant mortality and finding solutions a top priority. In 1995, the Maryland Commission on Infant Mortality Prevention identified the need to reduce the racial gap in infant deaths among African-Americans and Whites as a major goal in its eight point statewide strategic infant mortality prevention plan. In 1996, I asked the Commission to appoint a blue ribbon panel of experts to explore the factors contributing to the gap and develop recommendations for improvement.

Now I am pleased to share a copy of the final report from the Expert Panel on the African-American/White Infant Mortality Gap with you. This report represents an important first step as Maryland moves forward in developing strategies that will reduce the racial disparity in infant deaths. We must all unite behind the goal of giving every child a healthy chance at life and the chance to thrive! I strongly encourage you to take these recommendations back to your communities and work for positive change. Our children are counting on us.

Sincerely,

Parris N. Glendening

Parris N. Glendening
Governor

Overview

"Infant mortality is the most sensitive index we possess of social welfare and of sanitary administration, especially under urban conditions" wrote Sir Arthur Newsholme in 1909. Though, we have made considerable progress in reducing infant mortality since the early 1900s, the racial disparity in infant mortality still remains as a major public health problem. There are no easy answers to why this disparity continues to persist today. The work of the Expert Panel on the African-American/White Infant Mortality Gap represents an important first step for the State of Maryland's efforts to develop long-term public health policy solutions that will ultimately close the gap.

During the 20th century, there have been considerable medical advances that have significantly increased the odds of even the tiniest infants to survive within the first year of life. However, the racial gap in infant mortality is a problem that cannot be solved alone with medical technology. This issue forces us to examine our health care system and acknowledge its strengths and weaknesses. The Expert Panel's work reveals that despite our medical innovativeness, we have failed miserably to serve our most vulnerable—pregnant women and children, particularly low income and minorities. One could easily draw the conclusion that we have a two-tiered health care system—one that serves the general population and one that serves low income and minority citizens. There has been considerable research revealing that African-Americans receive less intensive health care services, have lower utilization rates of preventative care and are generally less satisfied with their experience with the health care system. Addressing the racial disparity in infant mortality should be the beginning of opening up a dialogue on other health disparities adversely affecting minorities.

The work of the Expert Panel reveals the inter-relatedness of health status and pyschosocial issues among African-Americans as it relates to infant mortality prevention. As we approach the next millennium, our society is under seige by a host of complex social problems including AIDS, a major drug epidemic, violent crimes causing unsafe communities for raising families, increasing environmental problems that threaten our health, violent deaths, chronic poverty and unemployment, poor public educational systems that rob children of academic promise, inadequate housing for low income citizens, rising cases of child abuse and neglect, etc. Unfortunately, the sheer magnitude of societal problems have resulted in our health care system being ill-equipped to address these problems, despite the strong connection between these psyschosocial issues and poor health outcomes.

The challenge is for this State to create new models of health care that enables the health care delivery system to address both the medical and psychosocial needs of patients in a culturally-competent manner. We must advocate for the training of a new breed of health care professional—a "Renaissance practitioner", a term coined by Dr. Louis Sullivan. The "Renaissance practitioner" will be armed with medical training that includes cultural competency in treating low income and minority populations, key communication skills necessary for cultivating strong patient-provider communication, and a sensitivity to addressing a patient's pyschosocial and medical needs within a cost-conscious health care environment. The core values of our health care system should focus on dignity, respect, trust, privacy, patient empowerment and quality health care. Our health care system and the training of health providers has to evolve as the needs of patients—particularly, those most vulnerable for adverse outcomes— changes over time.

Finally, the Expert Panel's analysis of racial disparity adds strength to the growing movement for more community-based programs aimed at improving the health outcomes of children, promoting positive parenting practices and empowering individuals to be economically self-sufficient citizens contributing to the well-being of their families and neighborhoods. Communities know best what problems contribute to adverse outcomes for their children and families and they should take a leading role in developing solutions. Programs such as Baltimore Healthy Start are examples of how empowering communities and expectant families who have given up hope for a better future can lead to better health outcomes. We must move away from programs that define the needs of those it serves and attempt to address their needs as "one solution fits all problems" approach. Every family deserves individual care based on their needs and access to risk-appropriate medical care and supports within their communities.

It is our duty to give every infant the chance to survive and thrive in the first year of life. We have a greater responsibility to ensure that low income and minority citizens who are more disproportionately affected by societal problems, have access to health care and other support services. As we pledge efforts to reducing the gap in infant mortality between African-Americans and Whites, we must be willing to acknowledge what is wrong with in our society and health care system and have the courage to change it. Let the recommendations of the Expert Panel serve as our collective call to action for the sake of Maryland's mothers and infants. Join Governor Glendening and myself in making the needs of all *Children First* in Maryland.

Linda S. Thompson, DrPH
Special Secretary

Executive Summary

Infant mortality is a complex health problem with socioeconomic implications. Infant mortality is an indicator of society's overall quality of life. Maryland and the nation have made great strides in reducing the number of infant deaths since the early part of this century largely through community-based public health measures and improvements in sanitation and overall living conditions. As a new century approaches, a quiet crisis continues to afflict African-American infants who are more than twice as likely to die within the first year of life as White infants. The obvious question emerges: With all the medical advances and efforts to expand public health care coverage to women, why are African-American babies dying at such an alarming rate?

There are no easy answers to this question. The gap between African-American and White infant mortality rates represents a perplexing problem. It is clear that African-Americans are at increased risk for preterm delivery which is a leading cause of infant mortality. Preterm babies are at significant risk for mortality and morbidity. Research has identified multiple medical and psychosocial factors with strong causal links to increased risk for preterm delivery in African-American women.

It is also clear that a woman's living environment and family support mechanisms influence her overall health status and pregnancy outcome. African-Americans are more disproportionately affected by chronic poverty, high unemployment, inadequate education, housing segregation, violence and crime. Thus, African-American women require more comprehensive services to address the multiple risks for infant mortality.

Over a year ago, the Maryland Commission on Infant Mortality Prevention identified reducing the African-American/White infant mortality gap as a priority in its *Five Year Statewide Infant Mortality Prevention Strategic Plan*. The Commission appointed a blue ribbon panel of maternal and child health experts from perinatal epidemiology, maternal-fetal medicine and those with experience managing community-based infant mortality prevention programs to investigate this issue and develop recommendations for ameliorating this problem. From the beginning, the Expert Panel decided not pursue a new research agenda, but instead to use existing research to serve as the basis for its recommendations. The Expert Panel devoted its first three meetings to reviewing the existing research on racial disparity of infant mortality rates. Several panel members presented their research findings analyzing the relationship between domestic violence, maternal stress and chronic medical conditions and increased risk for poor birth outcomes.

After its extensive review of current research, the Expert Panel focused its recommendations on four major areas related to poor pregnancy outcomes among African-American women. These major areas include: (1) the treatment and prevention of perinatal infections and chronic medical conditions among childbearing age African-American women, (2) the reduction of psychosocial and behavioral risks including domestic violence and substance abuse among African-American women, (3) community-based services that integrate the medical and psychosocial needs of high risk populations in Baltimore City and Prince George's County, and (4) regionalized systems of care to improve the survival of low birth weight infants.

Specifically, the Expert Panel recommends the following:

Recommendation #1a:
To reduce the African-American/White infant mortality gap, providers must identify preconceptional health risks and maternal illness/conditions and institute appropriate interventions.

Maternal health status plays a major role in determining the future risk of adverse pregnancy outcomes. Chronic diseases such as diabetes, asthma, hypertension and renal disease significantly increase a woman's risk for preterm delivery and other adverse pregnancy outcomes. Unfortunately, some women are not diagnosed with a medical condition until after they become pregnant which makes treatment and management of the condition significantly more difficult. African-American women are disproportionately affected by chronic diseases, regardless of their socioeconomic level. This fact alone may serve as a significant factor in explaining the gap in infant mortality between African-Americans and Whites.

Appropriate health care during pregnancy can improve the mother's health and reduce the risk for an adverse pregnancy outcome. However, before conception or pregnancy is an optimal time to identify and manage chronic medical conditions to improve pregnancy outcomes. It has been well documented that African-American women have fewer physician visits each year and they receive less intensive health care services. African-Americans are also more likely than Whites to be uninsured thereby adding an additional barrier to health care.

The Expert Panel recommends the provision of routine screening for chronic diseases as part of preconceptional and prenatal care. Providers should use well woman and family planning visits as opportunities to screen for chronic medical conditions. Providers should treat chronic diseases within the context of medical protocols or refer patients to specialists when appropriate. Providers also have a responsibility to provide culturally-sensitive medical care to minority populations since previous bad experiences with the health care system can serve as a barrier to seeking future health care. Legislators, hospital administrators and public health administrators must actively support the availability of community-based medical care prior to and during pregnancy for better diagnosis and treatment of chronic medical conditions. Managed care organizations should promote an annual preconception visit for women of childbearing age as part of its preventative care.

Recommendation 1b:
To reduce the African-American/White gap in infant mortality, providers should screen and treat infections both prior to and during pregnancy.

The presence of reproductive tract infections, such as bacterial vaginosis, chlamydia and gonorrhea, increases a woman's risk for preterm delivery by two to three fold. Prevention and treatment of perinatal infections and sexually transmitted diseases (STDs) should be a major goal in reducing the African-American/White infant mortality gap. Perinatal infections can be screened for and treated during pregnancy. However, every effort should be made to screen and treat STDs and perinatal infections prior to pregnancy. African-American women have higher rates of infection than White women; thus, the medical community should place a broader emphasis on preventing and treating infections prior to pregnancy as a strategy for reducing the gap of infant mortality between African-American and White infants. Medical providers should counsel women about the importance of condom use as part of safe sex practices and disease prevention.

The Expert Panel strongly recommends that routine screening for infections be included in both preconceptional and prenatal care according to established medical protocols. Providers should also screen for perinatal infections and STDs regularly as part of well-woman and family planning visits. There should be aggressive follow-up for patients identified with infections to ensure that adequate treatment of the infection takes place. Screening and treatment should also include the woman's male partner to reduce the re-occurrence of infection. The screening of perinatal infections and STDs should be culturally competent. The Expert Panel recommends that the curricula for all health care providers include cultural competency training. Managed care organizations and hospitals should provide annual cultural competency training for their staff.

Recommendation #2:
To reduce the African-American/White gap and the impact of psychosocial and behavioral risks such as domestic violence, poor mental health, unwanted pregnancy and substance use will require improved health promotion and disease prevention efforts and comprehensive prenatal care.

The impact of psychosocial factors on the risk of preterm delivery should be clearly understood. Psychosocial risks during pregnancy such as smoking, heavy alcohol consumption, substance abuse or chemical dependence, poor mental health, and domestic violence are associated with poor birth outcomes, regardless of the race of the mother. These psychosocial risks during pregnancy have led to increased risk for medical complications, low birth weight and infant mortality. These psychosocial risks do not contribute significantly to the African-American/White infant mortality gap because African-American women have lower or similar rates of many of these risks compared to White women. However, given the high prevalence of these psychosocial risks in the State, particularly in Baltimore City and Prince George's County, these factors must be addressed. It is important to note that assessment for pyschosocial risks should be done in a culturally competent manner to enable the provider and patient to develop an appropriate level of trust necessary for discussing psychosocial issues.

Cigarette Smoking

Research has indicated a strong causal link between cigarette smoking and low birth weight. It is believed that 20 percent of all pregnant women smoke during the course of their pregnancies. Unfortunately, few providers whether in obstetric or non-obstetric settings rarely provide behavioral counseling to patients to reduce cigarette smoking. Thus, the Expert Panel recommends that providers routinely screen for tobacco use as part of preconceptional and prenatal care. Providers should also counsel all women about the dangers of smoking during pregnancy and dangers of secondhand smoke exposure to infants. Those women identified for tobacco use should be counseled and referred to smoking cessation programs.

Alcohol Use

Research exploring the connection between alcohol consumption and poor pregnancy outcomes has not been consistent. Most studies, however, have found little or no association between lower birth weights and growth retardation except for women who were heavy, chronic drinkers. The Expert Panel recommends that providers screen for alcohol consumption as part of preconceptional and prenatal care with appropriate referrals to treatment programs. Women should also be counseled about the dangers of alcohol consumption early during their pregnancies as part of preconceptional and prenatal care.

Drug Use

Studies exploring the association between illicit drug use during pregnancy and adverse outcomes have also been mixed. There is not any strong evidence linking illicit drug use during pregnancy with infant mortality. However, illicit drug use is often a marker for women in need of wide range of medical and social supports to reduce the negative effects of drug abuse. The Expert Panel recommends that all women be screened for drug use during preconceptional and prenatal care with referral to treatment programs. Despite Maryland law which establishes priority slots for pregnant and postpartum women in treatment programs, there continues to be a need for more treatment slots for women and a greater number of programs aimed at meeting the unique needs of pregnant women and those with dependent children. Thus, the Expert Panel strongly recommends that the Maryland Commission on Infant Mortality Prevention and the Maryland Department of Health & Mental Hygiene work with legislators and treatment program directors to increase treatment slots and tailor these programs to meet the needs of women.

Unintended pregnancy

National and local data indicate that at least 50 percent of all pregnancies are unintended. African-American women are more likely to have unintended pregnancies than White women. Women with unintended pregnancies are more likely to delay seeking prenatal care until the third trimester or not seek care at all which increases the risk for low birth weight and infant death. Thus, the Expert Panel recommends that women be screened for "intendedness" of pregnancy with unintended pregnancies being classified as high risk. Providers should also counsel and educate childbearing age women and their male partners about family planning services as part of preconceptional care to reduce the likelihood for future unintended pregnancies. Legislators and providers should work together to increase funding for family planning services.

Maternal stress

Women's exposure to stress has been associated with risks for poor pregnancy outcome including late initiation of prenatal care and increased substance abuse. Stress has also been linked to higher instances of low birth weight and preterm deliveries. African-American women have higher levels of stress associated with poverty, financial hardship, unemployment or problems with family relationships which increases their risk of low birth weight births. The Expert Panel recommends that pregnant women be screened for social risks and be properly referred to community-based social support programs. Greater linkages should be made between health departments and managed care organizations to effectively address the psychosocial needs of pregnant women as part of Medicaid managed care.

Domestic violence

An estimated 3 to 20 percent of women report domestic violence during pregnancy and the first six months after the birth of their infant. Violence during pregnancy has been linked to late initiation of prenatal care, poor prenatal care, and low birth weight births. Abuse during pregnancy has been associated with increased stress, social isolation, symptoms of depression and substance abuse among pregnant women. African-American women who are victims of violence are more likely to initiate prenatal care during the third trimester of pregnancy than nonabused women. Though research has not clearly demonstrated the relationship of domestic violence and poor pregnancy outcomes, domestic violence is a significant risk factor that should be identified among childbearing age women. The Expert Panel recommends that all providers conduct a routine identification and assessment for abuse among African-American women as part of preconceptional and prenatal care. Pediatric providers should also assess mothers of infants and young children for domestic violence. Providers should make appropriate referrals to domestic violence support programs and maintain proper linkages with social service agencies to offer further assistance for domestic violence victims.

Comprehensive Prenatal Care

Improved access to prenatal care will only have a modest impact on improving the gap in low birth weight (LBW) and infant mortality rates between African-American and White infants. Improving the quality of prenatal care may have a larger effect on reducing the gap, but it is difficult to predict the exact impact. Comprehensive prenatal care includes basic medical care and ancillary services such as social and nutritional services, health promotion, outreach and home visiting. These ancillary services address health behavior, the woman's social environment and her risk of psychosocial problems. Research from North Carolina and Kentucky suggests that comprehensive prenatal care may reduce the occurrence of LBW. The Expert Panel recommends that providers serving women on Medicaid offer comprehensive prenatal care services to their clients. Managed care organizations should incorporate comprehensive prenatal care into their care guidelines to promote the provision of more comprehensive services for high risk pregnant women. It is also vital that comprehensive prenatal care be culturally-competent to ensure that minority patients receive the maximum benefits of this intensive care. There should also be intensified efforts to promote breastfeeding among African-American women considering the positive health benefits to newborns and increased opportunity for mother-infant bonding.

Recommendation #3:
Improve community-based services that address broad issues in high risk communities like Baltimore City and Prince George's County.

In the last thirty years, Maryland like the rest of the nation has witnessed a transformation of its communities with the loss of manufacturing jobs and migration patterns away from urban areas. Increasingly, the poor have become concentrated within urban neighborhoods due to the middle class flight out of cities. Neighborhoods have become more segregated than ever along racial and social class lines. This concentration of poverty and loss of manufacturing jobs has exacerbated problems of chronic poverty, high unemployment, poor housing and increased crime. African-Americans and other racial minorities are disproportionately affected by these problems. It is clear that access to quality prenatal care alone for African-American women will not significantly reduce the African-American/White infant mortality gap. Society must begin to address the underlying impact of poverty. Comprehensive programs, however, can ameliorate some of the consequences of poverty on families.

In 1991, Baltimore City embarked on a major demonstration project, Healthy Start, whose goal was to offer comprehensive supports to high risk women and their male partners. A key component of the program has been its individualized care plans tailored to meet the unique needs of each participant and an on-going home visiting component that employs trained community residents as lay health advocates. The program also provides life skills counseling, parenting education, linkages to remedial education and job training programs. The program also links women to family planning services and other medical services to reduce the risk of adverse pregnancy outcomes. The nationally recognized men's services component plays a major role in helping young African-American fathers learn parenting skills, reduce risky behavior such as drug use, violence and criminal activity and obtain the necessary job skills for legitimate employment avenues. The local evaluation demonstrates that the Healthy Start program has reduced low birth weight and very low birth weight rates and instances of preterm delivery among program participants.

However, the challenge is to sustain and build upon the successful efforts of Baltimore Healthy Start as the problems associated with urban poverty extend to suburban communities with high concentrations of low income residents. Prince George's County is a prime example of a suburban community witnessing the effects of chronic urban poverty and associated health risks as residents from the neighboring District of Columbia migrate into the county. Prince George's County has one of the highest infant mortality and low birth weight rates in Maryland. The Expert Panel recommends that the successful components from the Baltimore Healthy Start program be implemented in Prince George's County with public and private funding support.

Recommendation #4a:
To reduce African-American/White gap in infant mortality, it will be necessary to strengthen regionalized perinatal systems that assure that all women in need of high risk care for medical complications have access to this care and to improve the survival of low birthweight infants.

It has been well documented that African-American women are more likely to have chronic medical conditions and perinatal infections which often classifies their pregnancy as high risk. Research findings have shown that newborns of women who receive high risk care at the time of delivery have better outcomes than newborns of women who are transported to this care after birth. Thus, it is important to assure that pregnant women in need of high risk care have access to this care prenatally. Unfortunately, all communities in Maryland are not able to provide their residents with high risk medical care which results in the need for pregnant women to travel to other regions for prenatal care. This arrangement is not conducive to the continuity of prenatal care throughout pregnancy as women often lack transportation.

In the 1970's, the National March of Dimes recommended the creation of regionalized systems of care to ensure that pregnant women had access to risk-appropriate care through a network of linked institutions and providers at various levels of care. These levels of care are based on the capabilities of the provider and institutions. Regionalized perinatal care systems have fostered stronger working relationships and regional cooperation among providers and institutions for the overall improvement of perinatal care. Regionalized perinatal care systems have been successful in ensuring that high risk infants are born at tertiary care centers which offer the highest level of specialized care. The odds of these infants surviving increases considerably when their births take place at tertiary care centers.

Maryland has not had a formal system of regionalized perinatal care. In recent years, Maryland has launched an informal system of regionalized care (Crenshaw Perinatal Health Initiative) through its maternal and newborn transports, funding of community-based regionalized perinatal care systems activities and voluntary designations of care levels for hospitals. Through the Crenshaw Perinatal Health Initiative, a number of counties have developed relationships with maternal-fetal specialists from tertiary care centers to provide monthly high risk clinical consultation services and continuing education on high risk patient care for local providers to increase the ability of these providers to care for high risk patients within their communities. However, the expansion of Medicaid managed care in Maryland may threaten this informal regionalized perinatal care system by limiting the feasibility for providers and institutions to continue regional cooperation. The Expert Panel strongly recommends that managed care organizations become partners with perinatal providers and institutions to sustain existing efforts and expand the further development of regionalized perinatal care in Maryland.

Recommendation 4b:
To reduce the African-American/White gap in infant mortality, it will be necessary to assure that women in need of high risk care for psychosocial or social problems have access to this care.

Psychosocial problems can adversely affect pregnancy outcome as these problems often serve as barriers for pregnant women seeking early and continuous prenatal care. Through the Crenshaw Perinatal Health Initiative and other regionalized perinatal care systems-building activities, communities have identified a number of psychosocial problems which have acted as barriers to care. As a result, these communities have formed innovative public-private partnerships to reduce the impact of these problems in the lives of pregnant women. Strategies to address psychosocial problems include home visiting for at-risk pregnant women, linkages with social service programs, substance abuse counseling with referral to treatment, and nutritional counseling. There is considerable evidence that these ancillary services aimed at reducing the adverse effects of psychosocial problems have resulted in lower rates of low birth weight births among low income women. The Expert Panel strongly recommends that the Maryland Commission on Infant Mortality Prevention and the Maryland Department of Health & Mental Hygiene continue to promote community level programs that capitalize on public-private partnerships to assure access to care for women with psychosocial problems. These partnerships may require contracts between local health departments and managed care organizations.

Conclusion

The work of this Expert Panel represents a beginning in Maryland's efforts to promote better outcomes among African-American infants. Infant mortality rates for both African-American and White infants have improved significantly since 1992; however, the number of infant deaths among African-Americans remains unacceptably high. It is the hope of the Expert Panel on African-American/White Infant Mortality Gap that the African-American infant mortality rate will be no more than 11 deaths per 1000 live births as recommended by the Year 2000 Health Goals. However, Maryland should work intensively to reduce the African-American infant mortality to no more than 10 deaths per 1000 lives. To effectively reduce mortality, Maryland must pursue a comprehensive approach that addresses the medical and psychosocial needs of pregnant women and their families. Prevention strategies must include comprehensive prenatal care services, psychosocial risk assessment with referral to social support programs, a stronger emphasis on identifying and treating perinatal infections and chronic medical conditions among childbearing age women and integrating medical and psychosocial support programs at the community level. The Maryland Commission on Infant Mortality Prevention and the Maryland Department of Health & Mental Hygiene must work collaboratively with providers, hospitals, communities, managed care organizations and graduate programs to address the racial gap in infant mortality as a state level policy issue. The importance of culturally-competent health care must also be addressed in efforts to reduce the gap.

"Closing the Gap"

Addressing the Disparity of Infant Mortality among African-American and White Infants: Approaches for Clinicians and Policymakers

Introduction

In its 1995 strategic plan for reducing infant deaths, the Maryland Commission on Infant Mortality Prevention identified closing the gap between infant mortality rates among African-American and White infants as one of its major goals. The first step toward meeting this goal was to seek the advise of experts who work in this field. The Commission asked them to review the literature, their own research and clinical experience, and the work being done elsewhere in the Nation to provide informed, clear advice on next steps that could be promoted by the Commission and by the agencies of Maryland State government.

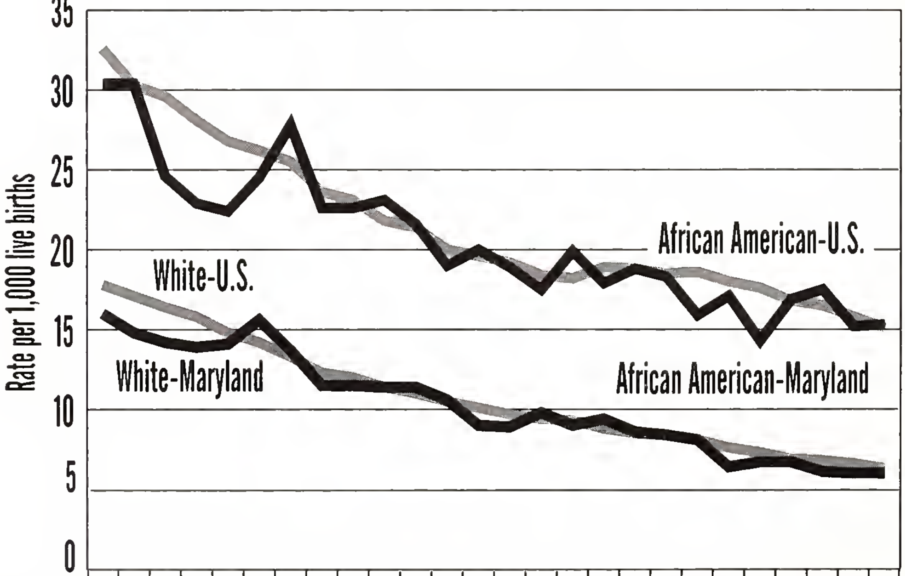
In early 1996, a panel of Maryland experts began a series of meetings to review the scientific issues and develop a set of practical recommendations that can be implemented over the next five years. The panel was fortunate to receive relevant statistical information from the Division of Health Statistics of the Department of Health and Mental Hygiene. This report summarizes the problem and the recommendations. This report is addressed to providers of obstetric and reproductive health care services to women in Maryland and is written to be comprehensible to Maryland policy makers.

Problem Statement

The infant mortality rate (IMR) in Maryland has declined, overall, from 19.1 infant deaths per 1,000 live births in 1970 to 8.7 in 1995. While the IMR among African-American infants has declined by 50% over this period, from 30.4 to 15.3, the IMR for White infants declined 63% from 16.0 to 6.0. As shown in Figure 1, the declines in infant mortality in Maryland reflect, almost exactly, the national trends.

Figure 1

Infant Mortality Rates by Race, Maryland and the United States 1970-1995.



	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
White-Maryland ■	16	14.8	14.2	13.9	14.1	15.6	13.7	11.5	11.5	11.4	11.4	10.6	9
African American-Maryland ■	30.4	30.4	24.6	22.9	22.4	24.5	27.8	22.6	22.6	23.1	21.6	19	20
White-U.S ▨	17.8	17.1	16.4	15.8	14.8	14.2	13.3	12.3	12	11.4	11	10.5	10.1
African American-U.S. ▨	32.6	30.3	29.6	28.1	26.8	26.2	25.5	23.6	23.1	21.8	21.4	20	19.6

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
White-Maryland ■	8.9	9.8	9	9.4	8.6	8.4	8.1	6.4	6.7	6.7	6.1	6	6
African American-Maryland ■	18.9	17.5	19.9	17.9	18.8	18.3	15.9	17.1	14.3	16.9	17.5	15.2	15.3
White-U.S ▨	9.7	9.4	9.3	8.8	8.5	8.4	8.1	7.6	7.3	6.9	6.8	6.6	6.3
African American-U.S. ▨	19.2	18.4	18.2	18.9	18.8	18.5	18.6	18	17.6	16.8	16.5	15.8	15.1

The gap in IMR between African-American and White infants can be defined in two different ways. When measured as the ratio of African-American to White mortality rates, the gap can be said to be increasing. Thus, in 1970 the IMR for African-American infants was 1.6 times that of White infants; this ratio has increased to 2.6 in 1995. The increased ratio of African-American to white IMR reflects the fact that while IMR has been falling for both populations, the decline among white infants has been much faster. Another way of measuring the gap in IMR between African-American and White infants, however, is to measure the absolute difference between the two rates. Using this definition, the racial gap in IMR has declined from 14.4 in 1970 to 9.3 in 1995.

Some experts believe that looking only at the ratio of IMR between African-American and White infants exaggerates the problem as the number of infant deaths and mortality rates for both groups are actually declining. Others argue that the ratio is the true measure of the racial difference. Regardless of which method is used to define the gap in IMR between African-American and White infants, this issue constitutes a major public health and public policy problem.

The higher rate in infant death among African-American infants appears to reflect, above all, their higher risk of low birth weight (LBW) births, related to higher rates of preterm birth (PTB) as well as lower gestation-specific birth weights. Multiple risk factors for low birth weight have been identified in the literature, but no one factor seems to completely explain this adverse perinatal outcome. There remains a great debate as to whether higher low birth weight risks among African-American infants represents the consequences of poverty, biological and medical factors, inter-generational effects of poor nutrition and diet, increased stress during pregnancy, or the long term effects of societal racism.

It should also be stated explicitly that pregnancy among teenagers does not explain the differences in IMR between African-American and White infants. While it is true that the IMR for women under 20 years of age (11.6 in 1995) is greater than that for women age 20 and over (8.1 in 1995), the number of infant deaths to teenagers constitutes a relatively small percentage of all infant deaths. Based on Maryland data for the years 1993-95, if the IMR for teen births were reduced to the same rate as all births, the resulting decrease in IMR would only be about one percent.

Low birth weight rates among African-American women in Maryland have increased. overall from 12.8% in 1986 to 13.5% in 1995, while LBW rates have increased among White births from 7.7% in 1986 to 8.5% in 1995. At the national level, however, rates of LBW are declining for African-American women from 13.3% in 1993 to 13.0% in 1995. Among White women, nationally, LBW has increased from 6.0% to 6.2% for the same years. This increase in LBW for White women reflects the very large rise in multiple births (twins, triplets and higher). Higher order multiple births among White women in the U.S. has increased 33% since 1980. These triplets and higher are much more likely to be low birth weight. They are more likely to be born to older mothers and those women who have used fertility-enhancing drugs. Increasing the rate of multiple births may account, in part, for the rise observed in the LBW rate in Maryland.

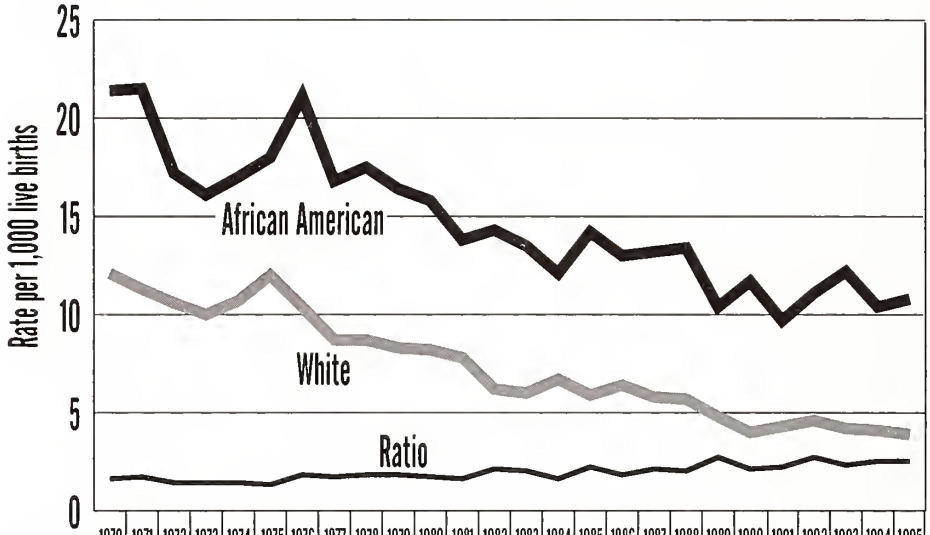
The trends in IMR by race reflect more closely the trends in neonatal mortality (deaths occurring in the first month of life) than they do the changes in post neonatal mortality (deaths occurring from one month of age to twelve months). (Figures 2 and 3).

The total number of infant deaths in Maryland in 1995 was 631, with 45% of these deaths coming from Baltimore City (125) and Prince George's County (157). These two counties accounted for 75% of the African-American infant deaths. Thus, efforts to reduce the racial gap in infant mortality must have a strong geographic focus on these two jurisdictions.

Differences in socio-economic status (SES) and in the level of poverty between African- American and White women are related to racial differences in infant mortality. Overall, poverty is highly associated with the risk of infant death. Among both African-American and White women, poor women are at a much higher risk of having an infant death than more affluent women (CDC, 1995). In Maryland, data on infant deaths by level of maternal education can be used to approximate the influence of SES on infant mortality and examine the racial gap. (Figure 4).

Figure 2

Neonatal Mortality Rates by Race and Ratio of African American to White Mortality Rates, Maryland, 1970-1995.

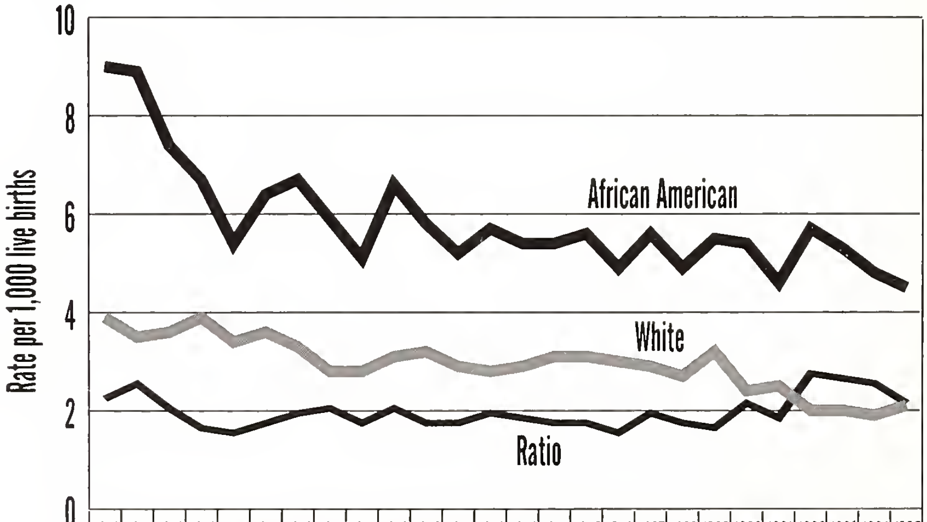


	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
White ▨	3.9	11.3	10.6	10	10.7	12	10.4	8.7	8.7	8.3	8.2	7.8	6.2	6	6.7	5.9	6.4	5.8	5.7	4.8	4	4.3	4.6	4.2	4.1	3.9
African American ■	21.4	21.5	17.2	16.1	17	18	21.1	16.8	17.5	16.4	15.8	13.8	14.3	13.5	12.1	14.2	4.9	13.2	13.4	10.4	11.7	9.7	11.1	12.2	10.4	10.8
Ratio —	1.8	1.9	1.6	1.6	1.6	1.5	2	1.9	2	2	1.9	1.8	2.3	2.2	1.8	2.4	2	2.3	2.3	2.2	2.9	2.3	2.4	2.9	2.5	2.7

Year

Figure 3

Postneonatal Mortality Rates by Race and Ratio of African American to White Rates, Maryland, 1970-1995



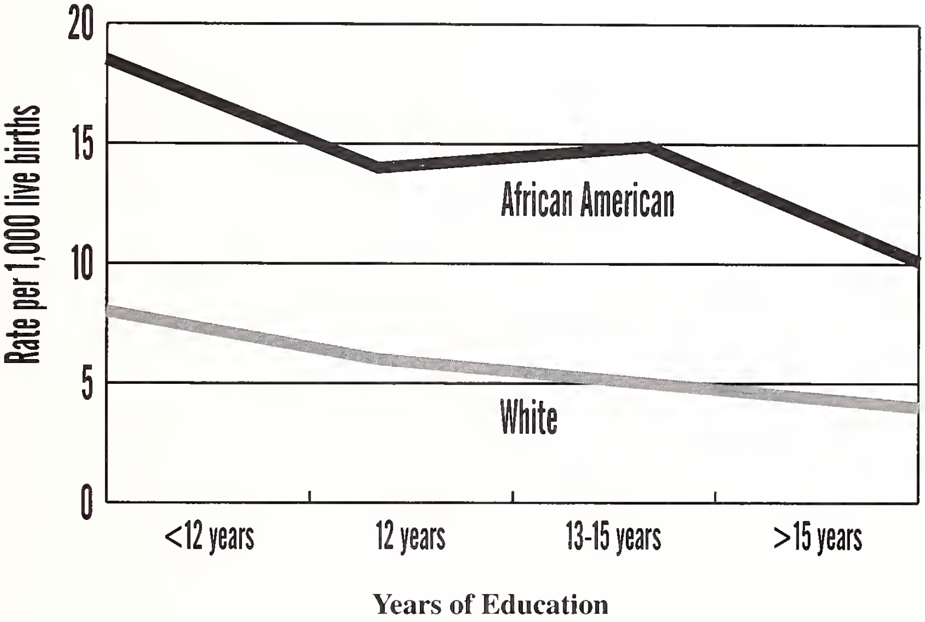
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
White ▨	3.9	3.5	3.6	3.9	3.4	3.6	3.3	2.8	2.8	3.1	3.2	2.9	2.8	2.9	3.1	3.1	3	2.9	2.7	3.2	2.4	2.5	2	2	1.9	2.1
African American ■	9	8.9	7.4	6.7	5.4	6.4	6.7	5.9	5.1	6.6	5.8	5.2	5.7	5.4	5.4	5.6	9	5.6	4.9	5.5	5.4	4.6	5.7	5.3	4.8	4.5
Ratio —	2.3	2.6	2.1	1.7	1.6	1.8	2	2.1	1.8	2.1	1.8	1.8	2	1.9	1.8	1.8	1.6	2	1.8	1.7	2.2	1.9	2.8	2.7	2.6	2.2

Year

The data show that women of both races with higher levels of education have lower IMR than women with lower levels of education. What is distressing, however, is that White women of the lowest education level have IMR that is still better than African-American women with the highest level of education. This observation has led others to conclude that poverty is a powerful explanatory variable, but it does not explain entirely the difference between African-American and White IMR.

Figure 4

Infant Mortality Rates by Years of Education for Women 19 Years of Age and Above, Maryland, 1993-95 Birth Cohorts.



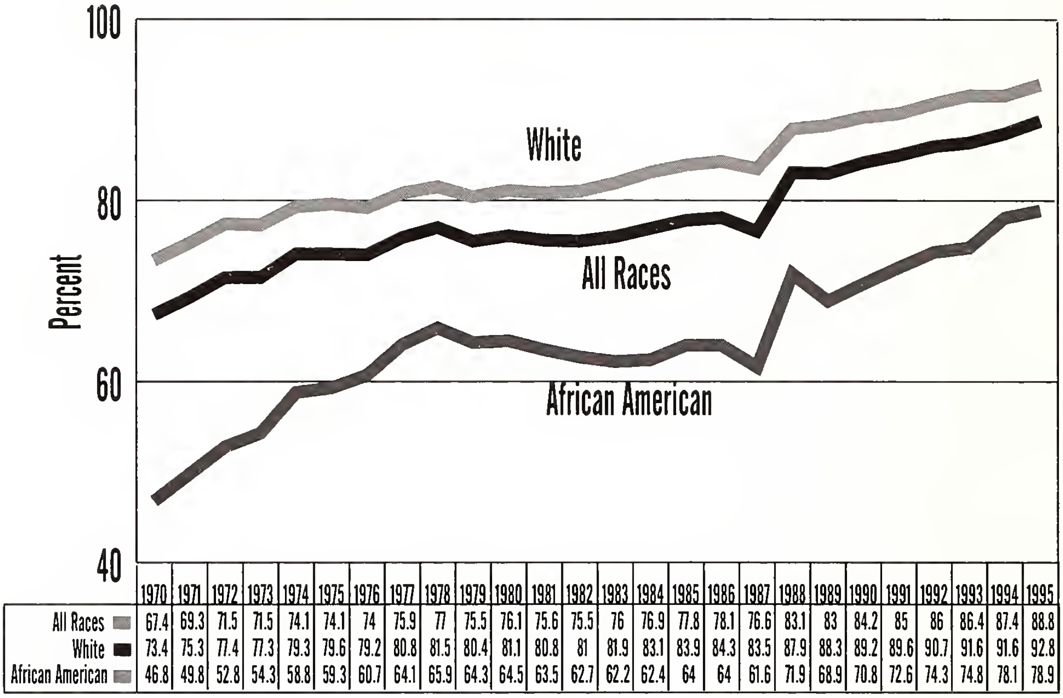
Patterns of access to prenatal care, alone, do not explain the differences in infant mortality between African-American and White mothers in Maryland. Overall, IMR is only weakly related to the initiation of prenatal care. Further, the proportion of women beginning prenatal care early has increased dramatically (Figure 5). In 1995, 78.9% of African- American women began prenatal care in the first trimester, compared to 46.8% of African-American women in 1970; among White women the comparable percentages were 88.8 and 67.4, respectively.

The brief review, above, of factors related to the gap between IMR among African American and White infants shows that we can describe the problem but do not have simple explanations for its occurrence. Many of the popular notions about infant mortality do not help us understand the racial gap. Therefore, we must look beyond such issues as teen pregnancy or lack of access to prenatal care if we are to develop effective strategies for closing the gap.

The effort to close the racial gap in infant mortality holds the potential for enormous gains to be made. In 1995, there were 343 infant deaths among the 22,426 African-American births in Maryland. Were the White infant mortality rate applied to this population, the number of infant deaths would have been only 134 — a potential reduction of 209 African-American infant deaths. These calculations indicate that finding a strategy for reducing the racial gap in infant mortality is probably the single most important thing that can be done to address the overall infant mortality problem in the State.

Figure 5

Percentage* of Women Who Began Prenatal Care in the First Trimester of Pregnancy by Race, Maryland, 1970-1995.



	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
All Races ▨	67.4	69.3	71.5	71.5	74.1	74.1	74	75.9	77	75.5	76.1	75.6	75.5
White ■	73.4	75.3	77.4	77.3	79.3	79.6	79.2	80.8	81.5	80.4	81.1	80.8	81
African American ▨	46.8	49.8	52.8	54.3	58.8	59.3	60.7	64.1	65.9	64.3	64.5	63.5	62.7

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
All Races ▨	76	76.9	77.8	78.1	76.6	83.1	83	84.2	85	86	86.4	87.4	88.8
White ■	81.9	83.1	83.9	84.3	83.5	87.9	88.3	89.2	89.6	90.7	91.6	91.6	92.8
African American ▨	62.2	62.4	64	64	61.6	71.9	68.9	70.8	72.6	74.3	74.8	78.1	78.9

Year

*Figures exclude women for whom timing of prenatal care is unknown

The remainder of this report is organized around four strategies for reducing the racial gap in infant mortality. These strategies are based on the best knowledge of the Expert Panel and their review of the relevant literature. The recommendations that derive from this analysis are intended, above all, to be practical and to make suggestions that can be implemented by health care providers and policy makers. Other areas of research and policy need to be pursued, as well, but these are not the focus of this report.

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Recommendations from the Expert Panel on African-American/White Infant Mortality Gap

Recommendation 1a:
To reduce the African-American/White infant mortality gap, providers must identify preconceptional health risks and maternal illness/conditions and institute appropriate interventions.

Differences in the health status of women by race may explain a significant portion of the African-American/White gap in infant mortality. African-American women experience higher rates of chronic and acute conditions both prior to and after conception. Furthermore, African-American women have less access to the medical care necessary to manage and treat such conditions either preconceptionally or during pregnancy. With the exception of Baltimore City with its two tertiary care medical centers, appropriate high risk care for women with acute and chronic medical conditions is often unavailable within the community in which a woman resides.

Chronic diseases as well as the treatment of such diseases often have wide ranging effects on a woman's health. Unless pregnancy somehow confers special protection to a woman, chronic diseases would be expected to adversely affect pregnancy outcomes. A disease may have effects beyond the organ system primarily affected as a result of complications of untreated disease (e.g., kidney damage associated with untreated hypertension). Even treated chronic diseases may adversely affect a single important physiologic function (e.g., renal function) and thereby represent a potent risk to the fetus and mother. Treatment itself may have adverse effects. For example, many chronic diseases (e.g., asthma, arthritis, lupus) are treated with steroids and this treatment is associated with an increased susceptibility to infection (Aucott, 1994). Furthermore, unlike an acute exposure or complication, a chronic disease affects a woman and her fetus from the time of conception until the time of delivery. Several investigators have conducted studies following pregnant women with specific chronic diseases. From these studies, a wide range of chronic diseases such as asthma, diabetes, hypertension, and renal disease have been reported to increase the risk of adverse pregnancy outcomes and preterm delivery specifically (Kramer et al., 1995; Mimouni et al., 1988; Sibai et al., 1983; Jones et al., 1996).

Chronic diseases disproportionately affect African-American women, regardless of socioeconomic status, and have been proposed as explaining, in part, the African-American/ White gap in infant mortality (Horton, 1995; NCHS, 1990). In a study of low income African-American women of childbearing age, more than 25 percent of the women reported a chronic illness such as diabetes, hypertension, asthma or any condition requiring regular medication (Kelley et al., 1992). Estimates of disease rates derived from the 1993 National Health Interview Survey (NHIS) confirm the increased risk of chronic conditions for African-Americans of reproductive age (<45 years): hypertension, 52.4 per 1,000 for African-Americans vs. 30.1 per 1,000 for Whites; diabetes mellitus, 8.8 per 1,000 for African-Americans vs. 7.6 per 1,000 for Whites; asthma, 56.3 per 1,000 for African-Americans vs. 48.4 per 1,000 for Whites. Based on National Health and Nutrition Examination Survey (NHANES II) data, the gap in hypertension rates is even greater for women of reproductive age (15-44 years): 11.3 percent for African-Americans vs. 4.8 percent for Whites (Germonious et al., 1991).

These higher rates of chronic diseases for African-Americans mean that even small increases in risk associated with chronic disease might significantly impact on the African-American/White infant mortality gap. Geronimus (1996) has shown that mortality rates for African-American women due to chronic diseases, including all medical causes, hypertension, anemia, urinary tract diseases, and heart disease are higher than the corresponding rates for White women aged 15-29 years of age. Moreover, the gap in mortality rates increases with the age of the woman. While Geronimus (1996) has not directly linked these differences to low birth weight rates, she shows similar increases in the gaps in low birth weight rates for African-American women as compared with White women as age increases.

During Pregnancy

While chronic conditions can rarely be eradicated, the provision of appropriate medical care during pregnancy can improve the mother's health and reduce her risk of an adverse pregnancy outcome. However, chronic diseases are often asymptomatic and many women, particularly minority women, have had little contact with the health care system prior to pregnancy. Among low income persons, only half of African-Americans had seen a physician in the past year as compared with two-thirds of Whites (Lillie-Blanton & Alfaro-Correa, 1995). Even among moderate to upper income Americans, African-Americans are more than twice as likely as Whites to be uninsured (14% vs. 5%) and they had fewer physician visits per year (Lillie-Blanton & Alfaro-Correa, 1995). Therefore, in addition to providing services to women who have already been diagnosed, screening for chronic conditions must also be part of the package of prenatal care services. With the exception of diabetes and hypertension, few chronic conditions are purposefully screened for during the provision of routine prenatal care services. Screening, in this context, does not necessarily mean doing a multitude of laboratory tests. It most likely involves taking a careful history to elicit signs and symptoms that may suggest the need for further tests. For example, upon learning of persistent symptoms of wheezing and shortness of breath, a provider might need to conduct further testing for asthma.

Before Conception/Pregnancy

Many of these chronic conditions can be identified and managed prior to conception, resulting in improved pregnancy outcomes. As chronic diseases can be difficult to address effectively during pregnancy, high quality preconception care of women with chronic diseases is critical to ensuring good pregnancy outcomes. Given the higher rates of chronic disease among African-American women, current strategies need to be broadened to include an emphasis on a woman's health prior to childbearing in order to close the gap in infant mortality between African-Americans and Whites.

There are two major opportunities for interaction between a woman and the health care system prior to conception: during the provision of well-woman care and during the provision of family planning services. The provision of well-woman care and family planning services represent opportunities for the identification and management of chronic medical conditions prior to pregnancy and consequently can lead to improved pregnancy outcomes. These are "teachable moments" which must be capitalized upon. Well-woman care and family planning services also represent an ideal opportunity to institute routine screening for chronic conditions (e.g., diabetes, hypertension). While such screening is already recommended, it may not always be done in practice. The following are some general treatment protocols for common high risk maternal conditions:

- Elevated blood sugar levels experienced by women with uncontrolled diabetes are associated with congenital malformations. Tight control of blood sugar in a diabetic woman prior to conception and in early pregnancy will reduce the risk of associated congenital malformations.

- Hypertension can be treated with a variety of different agents, some of which can increase the risk of infant death. Epilepsy is another disorder for which some treatments are dangerous to the fetus. For this reason, prepregnancy consultation for patients with any medical complications requiring treatment can be quite helpful. This can allow for the selection of an appropriate therapeutic regimen that will stabilize the woman and still be acceptable both during and prior to pregnancy.

- Low levels of folic acid during the first weeks of pregnancy are associated with an increased risk of neural tube defects (a severe and potentially life threatening congenital malformation). Preconceptional management of women with chronic diseases which affect their folate levels (e.g., epilepsy) could improve their nutritional status prior to pregnancy and ensure a healthy start to the pregnancy. This is just one example of a chronic disease which adversely affects a woman's nutritional status and where preconceptional management could benefit the woman and her fetus.

The Expert Panel recommends that the identification and management of chronic as well as acute (specifically, infections) conditions be improved during the preconceptional and prenatal periods. To this end, the Expert Panel recommends that community-based medical care prior to and during pregnancy be available for women in order to identify and manage these conditions. Furthermore, it is recommended that providers make appropriate referrals of patients who require specialized care. Finally, providers of preconceptional and prenatal services need to be "culturally competent" in order to ensure access to care for all women. Providers and systems of health care which are insensitive to cultural differences of women may pose a significant barrier to the access of needed services by women. In addition, culturally-competent health promotion/education programs should be available at the community level to further educate African-Americans about the importance of seeking preventative health care including preconceptional and prenatal care.

The issue of cultural competency in health care is not without controversy. Members of the Expert Panel believe that this issue must be addressed as part of efforts to reduce the racial gap. The way a woman is treated by her provider and her interaction with the health care system plays a major role in determining her future access to health care. A negative experience with the health care system can strongly discourage future access. The medical community has the challenge to make every woman's experience with the health care system a positive, enriching experience. There must be a realization that the medical community must better serve African-Americans and other minority populations.

To achieve the goal of making every health care contact a positive experience for minority populations, it is vital that health care providers and their staff establish a trusting, respectful relationship with each patient. Despite the demands of increasing patient loads, health care providers have a responsibility to create an environment where patients can talk openly about their health concerns and to ask questions. Providers should provide culturally-competent health education and counseling to patients as well. Unfortunately, the training of health care providers does not adequately teach providers how to provide culturally-competent health care. Therefore, the Expert Panel recommends that all medical/health curricula include cultural competency training for health care providers-in-training as a requirement for graduation. Hospitals, managed care organizations and professional societies should offer annual cultural competency trainings for providers. The Maryland Commission on Infant Mortality Prevention should work with the Maryland Department of Health & Mental Hygiene, graduate schools, community organizations, managed care organizations and professional associations to increase culturally-competent health care as a state level health policy issue.

Action Steps

1. Routine screening for chronic diseases must be emphasized in the provision of both preconceptional and prenatal care. Screenings should be culturally-competent

2. If chronic diseases are identified, appropriate management according to accepted protocols is necessary. If a provider is not knowledgeable and experienced in the care of such patients, appropriate referrals to other providers must be instituted.

3. Legislators, hospital administrators, and public health system administrators must actively support increasing the availability of community-based medical care prior to and during pregnancy which addresses the needs of women with chronic diseases, possibly through the improvement and maintenance of the regionalization of perinatal care.

4. To ensure the availability of culturally-competent health care for minority populations, there should be a stronger emphasis on cultural competency training in the curricula for future physicians, nurse practitioners, nurse midwives, pediatricians, and nurses as a requirement for graduation.

5. As part of quality assurance monitoring, managed care organizations should use patient satisfaction surveys to monitor the ability of providers within their network to provide culturally-competent care.

Recommendation #1b:
To reduce the African-American/White gap in infant mortality, providers should screen for and treat infections both prior to and during pregnancy.

Recent work by several investigators has provided considerable evidence of a causal link between reproductive tract infections and preterm birth (Romero et al., 1993). Investigators have reported increased risks of preterm delivery associated with bacterial vaginosis, chlamydia, gonorrhea, and group B streptococcus (lower reproductive tract infections), as well as chorioamnionitis (an infection of the fetus and fetal membranes) (Hillier et al., 1995; Goldenberg et al., 1996). A two to three fold increase in the risk of preterm delivery has been associated with the occurrence of reproductive tract infections during pregnancy (Romero et al., 1993).

Prevention and treatment of these infections may be pivotal to progress in closing the African-American/ White gap in infant mortality. There appear to be higher rates of infection among African-American women, and these infections appear to affect a substantial proportion of pregnant women. Goldenberg et al., (1996) in a study of low income prenatal clinic patients, reported higher rates of chlamydia (15.5% vs. 4.5%), gonorrhea (2.5% vs. 0.4%), group B streptococcus (24.3% vs. 14.2%), and bacterial vaginosis (22.7% vs. 8.8%) among African-American women compared to White women.

During Pregnancy

Unlike other strong risk factors for preterm delivery and infant mortality, reproductive tract infection is a relatively modifiable factor. Most of these infections can be easily screened for and treated during pregnancy. Women should also be educated regarding the prevention of initial and recurrent infection during pregnancy. Medical providers can counsel women regarding the importance of condom use and the hazards of multiple partners with regard to the acquisition of infection during pregnancy. The substantially higher rates of douching seen among African-Americans as compared to Whites (67% vs. 33%) coupled with research linking douching to an increased risk of chlamydia, gonorrhea and pelvic inflammatory disease suggests that changes in this behavior might also reduce infection among African-American women (Grodstein & Rothman, 1994; Stergachis et al., 1993). Efforts to prevent, detect, and treat such infections clearly then have the potential to significantly reduce the risk of preterm delivery and thereby also the gap between African-Americans and Whites.

Before Conception/Pregnancy

While these infections can be diagnosed and treated during pregnancy, adverse outcomes (stillbirth, preterm delivery, low birth weight) may still occur if treatment is initiated too late in pregnancy. Therefore, screening and treatment should also be undertaken before pregnancy. Prevention of these infections could be emphasized as part of preconception care. Given the higher rates of infections among African-American women, current strategies need to be broadened to include an emphasis on treating and preventing infections prior to childbearing in order to close the gap in infant mortality between African-Americans and Whites. Again, these conditions can be addressed during the provision of well-woman care and during the provision of family planning services.

Action Steps

1. Screening for infections must occur in both preconceptional and prenatal care, according to established protocols and recommendations.

2. Aggressive follow up of screened patients to provide treatment and preventive services must be part of preconceptional and prenatal care.

3. Appropriate and effective treatment of infections must be provided as part of preconceptional and prenatal care.

4. Prevention of infections must be taught as part of preconceptional and prenatal care to reduce the incidence and recurrence of these infections. Providers should counsel minority patients about the prevention of infections in a culturally-appropriate manner.

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Recommendation #2:
To reduce the African-American/White gap and the impact of psychosocial and behavioral risks such as domestic violence, poor mental health, unwanted pregnancy and substance use will require improved health promotion and disease prevention efforts and comprehensive prenatal care.

Psychosocial risk during pregnancy including smoking, heavy alcohol consumption, substance use or chemical dependence, poor mental health, and domestic violence are associated with poor birth outcomes including low birth weight and infant mortality. However, it is unlikely that these particular health behaviors are contributing to the racial gap in infant mortality because African-American pregnant women have similar or lower rates of many of these psychosocial risks compared to White populations. Nevertheless, these psychosocial risks have high prevalence, especially in Baltimore City and Prince George's County, and there are immediate actions that can be taken on the part of legislators and providers of medical and social services to pregnant women that would be important for an overall reduction of adverse outcomes. Community coalitions and providers should work collaboratively to develop culturally-competent health promotion/education programs that educate women about the adverse effect of high risk health behaviors (e.g., drug use, cigarette smoking, poor nutrition, etc) on pregnancy as part of preventative efforts.

A: Smoking, Alcohol Consumption and Substance Use During Pregnancy

Cigarette smoking during pregnancy is the single most preventable factor for low birth weight and growth retardation. Overall about 20 percent of pregnant women smoke throughout their pregnancies but this varies widely by social class. Women with low-income or low levels of education have the highest consumption levels. As many as one-quarter of all low birth weight births could be prevented if smoking during pregnancy were eliminated. Women who smoke during pregnancy compared to non-smokers also have an elevated risk for developing selected medical complications during pregnancy (placenta previa, abruptio placenta); have their young infants experience more lower respiratory tract infections and asthma; use postpartum and pediatric health care services at higher rates; and experience more infant deaths due to Sudden Infant Death Syndrome. For these reasons, the Expert Panel recommends that all providers screen pregnant women and give them appropriate cessation or reduction advice for smoking during pregnancy and relapse prevention for the postpartum period. Most smokers want to quit and need assistance to achieve permanent cessation (Leichtenstein, 1992). Studies from non-obstetric (Duncan, 1991) and obstetric settings (O'Campo, 1995) suggest effective behavioral counseling by physicians rarely occurs.

Studies examining the association between alcohol consumption and poor pregnancy outcome have inconsistent results showing little or no association with lower birth weights and growth retardation except among those women who are chronic heavy drinkers during pregnancy (Larroque, 1992; Bonati, 1991). Reports of heavy alcohol consumption during pregnancy vary widely; data on consumption of more than one drink per day range from 3 percent to 13 percent (Chomitz, 1995). Although there appears to be a decreasing trends in alcohol consumption during pregnancy in the U.S., such rates have declined little, if any, for women of low social class (Chomitz, 1995; Serdula, 1991). Those women most likely to consume alcohol prenatally are also in the same group who continue smoking during pregnancy. Providers should routinely screen for heavy alcohol consumption during the preconceptional and pregnancy period and make appropriate recommendations for reducing heavy drinking.

Drug use during pregnancy is another health behavior that deserves attention. It is estimated that about 7-15 percent of women use or abuse drugs during pregnancy and use is higher among low-income women. In Baltimore City, self reports of drug use among low-income pregnant populations range from a low of 6-12 percent to 39 percent for high risk populations (O'Campo, 1992; Orr, unpublished data).

Associations reported in the literature between drug use and adverse pregnancy outcomes are mixed and studies have suffered from a number of methodological problems (e.g., small sample size and an inability to isolate the effect of single drugs). Surprisingly, there is little consistent evidence to support an association of drug use during pregnancy and infant mortality. Cocaine use has been associated with preterm delivery and low birth weight and possibly placental abruption (Chomitz, 1995). It is likely that drug use during pregnancy is confounded with a number of other adverse health outcomes and behaviors that may increase the risk for adverse pregnancy outcomes (e.g., poor nutrition, tobacco consumption, increased risk of sexually transmitted diseases and delayed prenatal care initiation and utilization) (Chomitz, 1995). Thus, drug use may act as a flag for women who need a whole range of services to offset the negative impact of the associated health behaviors such as smoking or poor nutritional patterns. All women who have been identified as using drugs during pregnancy must be referred to drug treatment programs if reductions in drug use during the prenatal period are to occur. Maryland law supports this effort as all pregnant women have priority for open slots in all types of treatment programs in accordance with House Bill 1345 which became law in 1993. Further actions on the part of legislators and treatment program directors in terms of (1) increasing the number of available treatment programs and (2) tailoring programs to meet the specific needs of women and particularly women with families (e.g., providing child care) are needed.

Action Steps

1. All prenatal care providers should screen and give appropriate cessation or reduction advice for smoking during pregnancy and relapse prevention for the postpartum period.

2. Providers should routinely screen for heavy alcohol consumption during the preconceptional and pregnancy period and make appropriate recommendations for reducing heavy drinking.

3. Providers should be encouraged to routinely screen pregnant women for illicit drug use with those identified drug users being referred to drug treatment programs.

4. The Maryland Commission on Infant Mortality Prevention and the Maryland Department of Health & Mental Hygiene should actively work with legislators and treatment center directors to support (1) increasing the number of available drug treatment programs and (2) tailoring programs to meet the specific needs of women and particularly women with families (e.g., by providing child care).

B: Psychosocial Risk and Unintended Pregnancy prevention

National and local data indicate that at least 50 percent of all pregnancies are unintended (IOM,1995). Many of these pregnancies result in live births, though 50 percent are terminated by therapeutic abortions. There is evidence from several sources that unintended pregnancy is associated with risk for a poor pregnancy outcome and that unintended pregnancy is more likely to occur among African-American than White women (IOM, 1995). The Fetal and Infant Mortality Review (FIMR) project of Healthy Start in Baltimore City has collected data about unintended pregnancies and infant death. A large proportion of the pregnancies which resulted in infant deaths were unintended. Women should be screened for intendedness of pregnancy and considered “high risk” for a poor outcome if they have an unintended pregnancy. Further, because greater prevention efforts are needed, legislators should support efforts to increase family planning funds and services to prevent unintended pregnancy.

Exposure to stress is also associated with many risks for poor pregnancy outcome including late initiation of prenatal care and substance use. Living under stressful or other adverse social conditions places women at risk of behaviors which increase the likelihood that they will have a low birth weight or preterm birth. There is evidence from a recent study in Maryland that higher levels of exposure to chronic stressful life conditions such as financial hardship, unemployment or problems with family relationships is significantly associated with increased risk of low birth weight among African-American women (Orr, 1996). The Expert Panel, therefore, recommends that women be screened for social risk and that appropriate linkages be made within communities between public health departments and other agencies with providers of prenatal care to ameliorate social risks where possible.

One mechanism by which women at high social risk of poor pregnancy outcome could be provided with needed supportive services could be through existing linkages between local health departments and providers of prenatal care (public and private). As managed care further shifts the provision of medical care for pregnant women away from local health departments (traditional providers of such care to many high risk women) and into other settings, nurses in local health departments or community-based programs such as the Baltimore City Health Department's Healthy Start program could increasingly assume additional responsibilities to support pregnant women at high levels of social risk. The Expert Panel strongly recommends that managed care organizations work collaboratively with local health departments to address the needs of pregnant women with high social risks. Managed care organizations should use the current prenatal risk assessment form for Medicaid patients as a tool to globally assess and identify psychosocial risks.

Action Steps

There should be universal screening of pregnant women in the following two areas:

1. Exposure to chronic stressful life conditions: Simple screening tools are available to routinely assess the presence of several aspects of stressful life conditions such as financial hardship, unemployment or problems with family relationships. Women exposed to chronic stress should be referred to appropriate services during their pregnancies.

2. Unintended Pregnancy: Assessing the intendedness of pregnancy is also a relatively brief process. Women who respond that they neither wanted to be pregnant now nor did they plan their pregnancy should be offered additional social support such as a resource mother or buddy to help them to accept this pregnancy and plan for a healthy birth. Women should be counseled on planning and spacing future pregnancies.

C: Domestic Violence Prevention During Pregnancy

Nationally and locally, violence has become a major public health problem. It is estimated that 4 percent - 20 percent (O'Campo et al., 1994; Parker et al., 1994) of all women report abuse during their pregnancy and 25 percent of women report abuse during the first six months after the birth of their infant (Gielen et al., 1994). Abuse during pregnancy has been associated with late entry into prenatal care, poor prenatal care, and low birth weight infants among adult and adolescent women. Abuse during pregnancy has also been associated with increased stress, increased isolation, increased depressive symptoms and substance use.

Providers should be increasingly aware that African-American woman are often the victims of multiple risk factors such as poverty, family conflict, domestic violence, substance use and mental health problems and there are several research studies which have shown positive correlations between these factors and poor pregnancy outcomes (Gary et al., 1996). Further, providers should be sensitive to the fact that women of color are often reluctant to report their abuse because of the police response to African-American males and because of perceived lack of sensitivity to their plight by many health care providers (Campbell, 1993; Richie & Kanuha, 1993).

African-American abused women are more likely to enter prenatal care in the third trimester compared to nonabused women (McFarlane, Parker & Soeken, 1996; Bohn & Parker,1993). In a multi-site study, in which Baltimore was a study site, African-American abused women had the lowest infant birth weights compared to abused Hispanic and White women (McFarlane, Parker & Soeken, 1996). Further, among the same study sample, African-American women who smoked and who were abused during pregnancy delivered infants with a 184 gram difference (lower) compared to Hispanic and White women who were not abused. Moreover, other studies have demonstrated an association between increased rates of mistimed and unplanned pregnancies for women who have abusive intimate relationships (Campbell et al., 1996; Gazmararian et al., 1995). Researchers have not been able to determine how domestic violence relates to poor pregnancy outcomes; however, domestic violence is a significant risk factor that should be identified for all women during their reproductive years.

Identification of and assessment for abuse among pregnant and parenting African-American woman should be included in the strategy for reducing the infant mortality gap between African-American and White infants. Further, such screening and referral activities would be appropriately conducted within family planning settings. Screening must be conducted in a manner that is culturally-competent to the population being served and linkages to appropriate services must accompany assessment of domestic violence during the preconception and prenatal periods.

Action Steps

1. Universal screening for abuse for all women receiving preconception, family planning, prenatal, postpartum and well baby services.

2. Ample opportunities for all providers who see pregnant and parenting women to receive training (in compliance with JCAHO mandated standards) related to appropriate screening, maintaining safety for the women, and referrals for abuse.

3. All agencies that provide care for pregnant and parenting women should have a directory of resources for referrals for women who have been identified as victims of abuse.

D: Comprehensive Prenatal Care

Improved access to prenatal care has been suggested as a possible solution to improving the gap in LBW rates between African-American and White newborns and, in turn, infant mortality rates. Improved access, however, is likely to have only a modest effect on the gap in LBW rates at best. For the most part, studies of the impact of potential increases in the use of prenatal care on the African-American /White differential in LBW rates indicate that even if 100 percent of African-American women received prenatal care, the gap in their rates relative to White women would still be large (Frank et al., 1993; Hogue, 1986). The reason for these findings is that the differentials in LBW rates persist for low risk as well as high risk women. Rawlings and Weir (1992) reported similar infant mortality rates for African-American and White newborns in a military population, but racial differences persisted for VLBW and LBW rates, although to a lesser extent for LBW rates.

Improved quality and comprehensiveness of prenatal care may have a larger effect on reducing the gap, but it is difficult yet to predict how large an effect it would have on prenatal care. The results of an evaluation of the care given in health departments in North Carolina and Kentucky by Buescher and Ward (1992) suggest that use of comprehensive prenatal care may reduce the differences in LBW rates between African-American and White women, although the differences by race remained statistically significant. The magnitude of the reduction in the African-American/White was of the order of about 25 percent. In general, comprehensive prenatal care includes not only the medical components of prenatal care but also the provision of ancillary services such as social and nutritional services, health promotion and outreach and home visiting, as needed. These ancillary services focus on health behavior, the woman's social environment and her risk of psychosocial problems such as exposure to violence. Comprehensive prenatal care should be delivered in a culturally competent manner to ensure that minority patients receive the maximum benefits of this intensive health care. There should also more intensified efforts to educate and encourage African-American women to breastfeed their infants, given the health benefits to newborns and the opportunity for increased mother-infant bonding.

Cultural competency among providers and their staff is vital when it comes to discussing psychosocial risks with minority patients. Psychosocial risks often represent deviant, criminal behavior as in the case of illicit drug use or domestic violence and these risks often represent a source of personal embarrassment or shame for women. The medical training of health care providers has not adequately prepared providers for establishing a level of trust with patients to allow them to openly admit to high risk behaviors and how to adequately counsel women about the dangers of these behaviors with referral to treatment programs and other supports. The Expert Panel recommends that health care professionals-in-training receive training on addressing psychosocial risks of patients in a culturally competent manner. Providers who are currently practicing should receive annual trainings through hospitals, managed care organizations and professional societies. The Maryland Commission on Infant Mortality Prevention and the Maryland Department of Health & Mental Hygiene should address collaboratively cultural competency when addressing psychosocial risks among pregnant women as a state level health policy issue.

Action Steps

1. With the growth of Medicaid managed care in Maryland, it is crucial that managed care organizations work collaboratively with local health departments to offer ancillary services to high risk pregnant women as part of comprehensive prenatal care.

2. It is also important to expand provider knowledge about the role of comprehensive prenatal care for high risk populations through continuing education and medical and nursing school/resident training programs.

3. Managed care organizations should strongly consider incorporating the components of comprehensive prenatal care into existing prenatal care guidelines to be used by providers within their networks.

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Recommendation #3: Improve community-based services that address broad issues in high risk communities like Baltimore and Prince George's County.

The Expert Panel recommends improving and expanding community-based services for women in high-risk communities throughout the state in order to reduce the African-American/White gap in infant mortality. The Expert Panel recognizes that the medical model alone is not sufficient to reduce the gap for women residing in the areas of greatest poverty and disadvantage, such as Baltimore City and Prince George's County. Issues such as substandard housing, unemployment, social isolation, lack of opportunity, crime, substance abuse and violence present challenges to the healthy pregnancy outcomes of women residing in these communities. These issues cannot be overcome by medical care alone.

Moreover, the impact of the racial disparity in birth outcomes is hardest felt in Baltimore City and Prince George's County. These two jurisdictions account for 282 infant deaths among African-Americans in 1995. The gap in the rates of infant mortality between African Americans and Whites cannot be addressed statewide unless there is a specific focus on these jurisdictions with interventions that are appropriate to high-risk, low-income urban areas.

The Expert Panel is highly encouraged by the results of the Healthy Start demonstration in Baltimore City, and believes that such comprehensive community-based strategies empower and build upon the resources of the community. These strategies are critical to Maryland's efforts to reduce the chronic differences in the African American/White gap in infant mortality and other birth outcomes, especially in its highest risk communities. The federally-funded Healthy Start initiative in Baltimore City has proven that a comprehensive community-based strategy aimed at supporting the predominantly African-American women in the highest risk communities in East and West Baltimore can significantly improve birth outcomes. As one of the original fifteen national sites chosen for this six-year demonstration in 1991, the Baltimore Healthy Start Program has created a system of comprehensive home and center-based services that has served over 3,000 pregnant women since the program's inception. Significant features of the Healthy Start model of services include:

Outreach and case finding

Healthy Start employs and trains outreach workers from the community to conduct outreach including door-to-door recruitment to reach even the hardest-to-find pregnant women who are eligible for Healthy Start services. This model has resulted in Healthy Start achieving a 97% penetration rate into the eligible population in the Healthy Start communities.

Comprehensive case management

Comprehensive case management and home visiting, carried out by neighborhood residents (called Neighborhood Health Advocates) under the supervision of professional case managers, have been the foundation of the Healthy Start project. This model of case management begins with the provision of emergency needs immediately upon enrollment of a woman into Healthy Start. This ability to meet families "where they are" and resolve any issues at hand, including imminent housing eviction, the need for emergency food, diapers or formula, or requests for substance abuse treatment helps to remove barriers for pregnant women in need of prenatal care. The Health Advocate and Case Manager work with the Healthy Start client to develop an individualized care plan. While providing medical care coordination is an important aspect of the case management, the most significant product of the Healthy Start's case management/home visiting model is its social support for women who are isolated emotionally and physically, often due to fear for their safety in these communities with high crime and violence rates. Healthy Start has been successful in gaining respect among its clients who are at-risk women highly skeptical and cynical of government programs. Healthy Start clients continually cite the value of "just having someone to talk to" as the most important feature of the program. They also note the benefit of having the program located right in the community.

Comprehensive Center-based services targeted at improving overall family functioning

As a complement to its individualized case management and home visiting services, Healthy Start also provides a variety of ancillary services within its Neighborhood Centers located in each of the target areas of East and West Baltimore. These services include: parenting classes, early childhood growth and development activities, a mothers' therapeutic support groups, family planning education, employment readiness and job development services, linkages to education services including on-site pre GED and GED classes, substance abuse counseling and linkages to treatment, on-site meals, special teen parenting activities, and nutritional counseling. The intent of the Neighborhoods Centers is to provide a warm, friendly atmosphere in which mothers can obtain the necessary supports, with other women with similar personal issues and needs, to improve self-esteem, self-sufficiency, and personal skills.

Engagement of male partners

A unique feature of the Healthy Start program is its Men's Services Program, a targeted effort to reach out and engage the biological fathers of Healthy Start babies and the male partners of Healthy Start mothers in an effort to improve their parenting skills, reduce their risk-taking behaviors (e.g., drug use, crime, violence), and advance their ability to find and maintain gainful, legitimate employment. Healthy Start recognizes the influential role that men play in issues of infant mortality. Mothers in the program have noted that the attitudes and behaviors of their male partners influenced their decisions such as whether to seek routine prenatal care, to use drugs or alcohol, to breastfeed, or to use contraception. By engaging the male partners and helping them develop positive attitudes and beliefs about pregnancy and responsible parenting, Healthy Start has made another important contribution toward reducing the African-American/White gap.

Outcome data from the local evaluation of the Healthy Start Initiative, conducted by the Johns Hopkins School of Hygiene and Public Health, Department of Maternal and Child Health, provide quantifiable evidence that a well-run, comprehensive, community-based project aimed at overcoming the strong influences of poverty and disadvantage in high-risk communities can improve birth outcomes (O'Campo, Schaefer, Squires & Caughy, 1996). In comparisons of pregnant women who received Healthy Start services during their pregnancy (participant group) to comparable women who did not received services (comparison group), statistically significant differences were seen in percentage of low birth weight (LBW), very low birth weight (VLBW) and preterm delivery. The LBW rate of the Healthy Start participant group was 11.7 percent compared to 19.2 percent among the comparison group. Moreover, the VLBW rate of the participant group was 1.5 percent which was a 67 percent improvement over the VLBW rate of 4.6 percent among the comparison group. Finally, the rate of preterm delivery among the participant group was 13.2 versus 23.2 among the comparison group.

The Expert Panel recognizes that government funding alone cannot be relied upon to initiate and sustain these types of community-based initiatives; and thus, the Expert Panel encourages public/private efforts to fund such efforts. Baltimore City has, indeed, been fortunate to have had the benefit of the large federal grant to implement the Healthy Start initiative, and deserves credit for its effective implementation of a complex model that has shown itself to work. With the end of the six year demonstration at hand in September 1997, it is incumbent on both Baltimore City and the State of Maryland to recognize that: (1) the demonstration project has made significant contributions in improving perinatal health outcomes in the project areas; (2) Healthy Start has valuable lessons for other areas of the State facing social issues; (3) that many of the successful elements from Healthy Start initiative can be replicated in other high-risk communities in Maryland; and (4) that Healthy Start in Baltimore City must be sustained.

The Expert Panel believes that the funding of ongoing community-based service initiatives must rely on public-private partnerships. Local, state and federal government must work with the medical community, foundations and businesses to pool resources for improving perinatal outcomes. These comprehensive models of services are expensive; therefore, the private sector including businesses, foundations, and the medical community, must assume their rightful obligation to contribute to sustaining these initiatives. Finally, the State of Maryland should recognize the financial savings that result from the preventative nature of initiatives like Healthy Start. Stated simply, the fewer very low birth weight babies born to low-income women, the fewer Medicaid dollars spent on neonatal intensive care hospital stays, re-hospitalizations, and maternal health complications, not to mention long-term savings to other systems such as special education. The establishment and maintenance of these comprehensive community-based service initiatives that will further reduce the African American/White gap in Maryland, while also improving the overall family functioning of those at highest risk throughout the State.

Action Steps

1. The Maryland Department of Health and Mental Hygiene and the Maryland Commission on Infant Mortality Prevention should work with (a) Healthy Start to develop mechanisms by which public-private partnerships can provide sustaining dollars to continue the Healthy Start initiative in Baltimore City, and (b) create a funded improved pregnancy outcome strategy for Prince George's county.

2. Healthy Start, in conjunction with the Department of Health and Mental Hygiene, should complete its fiscal analysis of the cost-savings of the program to the State, and provide its findings to the Maryland Commission on Infant Mortality Prevention.

3. The findings of the Healthy Start evaluation should be shared with the Health Department, Department of Social Services, Local Management Board in each jurisdiction and the private sector to encourage local jurisdictions to develop programs similar to Healthy Start in Baltimore City.

4. The managed care organizations in Maryland serving the Medicaid population should contract for Healthy Start or similar comprehensive services for their prenatal enrollees as a means of ensuring the best possible birth outcomes.

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Recommendation 4a:
To reduce the African-American/White gap in infant mortality, it will be necessary to strengthen regionalized perinatal systems that assure that all women in need of high risk care for medical complications have access to this care and improve the survival of low birth weight infants.

As noted in recommendation one, differences in health status of women by race may account for part of the African-American/White gap in infant mortality. Many of the factors that lead to the delivery of a very low birth weight or preterm baby are medical in nature (Kempe et al., 1992). There is considerable literature to suggest that newborns of women who receive high risk care at the time of delivery have better outcomes than newborns of women who are transported to this care after birth (Crenshaw, 1983; Harris, 1981; McCormick and Richardson, 1995; Mondalou, 1980; Rudolph et al., 1987). By inference, the effect may be even greater if care were provided earlier in the pregnancy before a problem becomes so severe that delivery is required to address it (Ricotti et al., 1995). Accordingly, it is important to assure access of all women to high risk care at the time when it is first needed. The overall goal should be to reduce health disparities that exist along racial or ethnic groups, socioeconomic level and geographic region. Risk-appropriate care should also be culturally competent.

The concept of perinatal regionalization was developed in the 1970's to improve access to specialized care for the high risk mother or newborn through the development of a system of care which linked institutions and providers at various levels of care. These levels were based on the capabilities of the provider or institutions and the kinds of patients that they should be cared for by them. There is considerable evidence that indicates that such systems are successful in concentrating the birth of high risk infants at tertiary care centers, of reducing infant deaths of high risk births in these centers, and in improving the survival of high risk infants at community hospitals, presumably through the transfer of these infants or provider education (McCormick et al., 1985).

Regionalization has never been formally implemented in Maryland, although an informal structure has been available until very recently to facilitate maternal and newborn transports. In addition, the State has recently worked with hospitals to determine informal designations of the level of hospitals providing perinatal care throughout the State. Moreover, the advent of Medicaid managed care may limit the feasibility of continued relationships among providers or institutions for the Medicaid population. In order to address this potential problem, it is imperative that Medicaid managed care contracts include provisions to continue the access of high risk mothers and newborns to appropriate and timely specialized care. For the non-Medicaid population, systems-building efforts may be needed to assure that all women and newborns in need of high risk care have access to this care at the time that it is needed most.

The assurance of care to women in need of high risk care can occur prenatally as well as at the time of delivery. There are a number of Maryland counties in which pregnant women do not have ready access to a perinatalogist or to high risk obstetric care in their community. Through the Maryland Perinatal Health Initiative and other recent activities, some of these counties have developed liaisons with one or more Fetal Maternal Units in and out of the State to provide high risk prenatal care and consultation to patients in their communities during their pregnancies. These liaisons have resulted in the development of monthly high risk clinics and more formal working relationships between the physicians in the community and the perinatalogists at the tertiary care centers. These clinics have permitted patients to stay in their communities and to be jointly cared for by local obstetricians and the perinatalogists during their pregnancies, also reducing the costs of care for both the patient and the health care systems.

While there are not data available (the numbers are too small in most communities to support this analysis) to investigate the effect of these activities, the potential reduction in the costs of care in the long run and the patients' nonmedical costs in the short run (e.g., transportation and time to travel to the tertiary care center) is large enough to promote their continuation. Their continuation, however, will require that mechanisms be established for reimbursing for the time of the perinatalogist and for working with Medicaid and other managed care organizations to assure that high risk women have access to these services.

Recommendation #4b: In order to reduce the African-American/White gap in infant mortality, it will be necessary to assure that women in need of high risk care for psychosocial or social problems have access to this care.

Not all preterm births or infant deaths arise from medical problems, per se, but have their origins in psychosocial or social problems that require assistance from providers other than traditional medical providers (Chomitz et al.,1995). Again, through the Crenshaw Initiative and other activities, some counties have developed public-private partnerships to assure that women with social or psychosocial problems have access to care to address these problems. These partnerships utilize the skills of the local public health departments to provide needed services like social services, home visiting, alcohol or substance abuse counseling, health promotion and education to all women, not just those who are have traditionally been health department clients. With the advent of the Medicaid managed care waiver, it will also be necessary to ensure access to these services for all Medicaid enrolled women. As noted in recommendation two, there is considerable evidence to suggest that the provision of care that includes these comprehensive services results in lower rates of low birth weight for low income women (Buescher & Ward, 1992; Strobino et al., 1995).

Thus, the Expert Panel recommends that the Maryland Department of Health & Mental Hygiene continue to promote programs at the local level that build public-private partnerships to assure access to comprehensive prenatal care for all pregnant women in need of this care. These partnerships may require the development of contracts between the health department and private providers or managed care organizations. Training for the provision of culturally competent care should be a component of these public-private partnerships.

Action Steps

1. The Maryland Department of Health & Mental Hygiene, Maryland Commission on Infant Mortality Prevention and the MHA: The Association of Maryland Hospitals and Health Systems should continue its efforts to develop standards for monitoring the provision of maternity and newborn care in hospitals across the State and strengthening the efforts before under Maryland's Perinatal Health Initiative.

2. The Medicaid program should ensure that all Medicaid managed care plans for women of childbearing age and their infants include contracts that provide for timely acquisition of high risk care through regionalized networks.

3. The Maryland Department of Health & Mental Hygiene should continue its efforts to develop public-private partnerships for the delivery of services to mothers and infants.

4. The State's Insurance Commission should work with tertiary care centers in and out of state to provide reimbursement for the provision of high risk maternity care to perinatalogists in unserved areas throughout the State.

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Conclusion

The African-American/White infant mortality gap is a complex issue. This problem will not be solved overnight. Maryland may not immediately reap the benefits of developing a more comprehensive, prevention-focused and holistic approach to meeting the perinatal health needs of African-American women and infants. To reduce the number of deaths among African-American infants, there must be a more concerted effort towards preventative care for childbearing age women to reduce the likelihood of perinatal infection and to treat chronic maternal conditions prior to pregnancy. In the immediate future, Maryland should strive to reduce African-American infant mortality to no more than 11 deaths per 1000 live births as outlined in Year 2000 Health Goals. A long term goal should be to reduce African-American mortality to less than 10 deaths per 1000 live births. The challenge will be for the health care community to develop a multidisciplinary approach that addresses the medical and psychosocial needs of pregnant women. These efforts will require all segments of the community to create new partnerships for the sake of promoting healthy birth outcomes. This report is a major first step in laying the foundation for addressing the African-American/White gap in Maryland. As a society, we cannot prosper and move ahead with success in the next millennium unless all of our infants can survive past the first year of life.

Recommendations and Action Steps

Recommendation 1a: To reduce the African-American/White infant mortality gap, providers must identify preconceptional health risks and maternal illness/conditions and institute appropriate interventions.

Action Steps

1. Routine screening for chronic diseases must be emphasized in the provision of both preconceptional and prenatal care. Screenings should be culturally-competent.

2. If chronic diseases are identified, appropriate management according to accepted protocols is necessary. If a provider is not knowledgeable and experienced in the care of such patients, appropriate referrals to other providers must be instituted.

3. Legislators, hospital administrators, and public health administrators must actively support increasing the availability of community-based medical care prior to and during pregnancy which addresses the needs of women with chronic diseases, possibly through the improvement and maintenance of the regionalization of perinatal care.

4. To ensure the availability of culturally-competent health care for minority populations, there should be a stronger emphasis on cultural competency training in the curricula for future physicians, nurse practitioners, nurse midwives, pediatricians, and nurses as a requirement for graduation.

5. As part of quality assurance monitoring, managed care organizations should use patient satisfaction surveys to monitor the ability of providers within their network to provide culturally-competent care.

Recommendation #1b:
To reduce the African-American/White gap in infant mortality, providers should screen and treat infections both prior to and during pregnancy.

Action Steps

1. Screening for infections must occur in both preconceptional and prenatal care, according to established protocols and recommendations.

2. Aggressive follow up of screened patients to provide treatment and preventive services must be part of preconceptional and prenatal care.

3. Appropriate and effective treatment of infections must be provided as part of preconceptional and prenatal care.

4. Prevention of infections must be taught as part of preconceptional and prenatal care to reduce the incidence and recurrence of these infections. Providers must counsel minority patients about the prevention of infections in a culturally-competent manner.

Recommendation #2:
To reduce the African-American/White gap and the impact of psychosocial and behavioral risks such as domestic violence, poor mental health, unwanted pregnancy and substance use will require improved health promotion and disease prevention efforts and comprehensive prenatal care.

Action Steps:

1. All prenatal care providers should screen and give appropriate cessation or reduction advice for smoking during pregnancy and relapse prevention for the postpartum period.

2. Providers should routinely screen for heavy alcohol consumption during the preconceptional and pregnancy period and make appropriate recommendations for reducing heavy drinking.

3. Providers should be encouraged to routinely screen pregnant women for illicit drug use with those identified drug users being referred to drug treatment programs.

4. The Maryland Commission on Infant Mortality Prevention and the Maryland Department of Health & Mental Hygiene should actively work with legislators and treatment program directors to support (1) increasing the number of available drug treatment programs and (2) tailoring programs to meet the specific needs of women and particularly women with families (e.g., by providing child care).

5. Exposure to chronic stressful life conditions: Simple screening tools are available to routinely assess the presence of several aspects of stressful life conditions such as financial hardship, unemployment or problems with family relationships. Women exposed to chronic stress should be referred to appropriate services during their pregnancies.

6. Unintended Pregnancy: Assessing the intendedness of pregnancy is also a relatively brief process. Women who respond that they neither wanted to be pregnant now nor did they plan their pregnancy should be offered additional social support such as a resource mother or buddy to help them to accept this pregnancy and plan for a healthy birth.Women should be counseled on planning and spacing future pregnancies.

7. Universal screening for abuse for all women receiving preconception, family planning, prenatal, postpartum and well baby services.

8. Ample opportunities for all providers who see pregnant and parenting women to receive training (in compliance with JCAHO mandated standards) related to appropriate screening, maintaining safety for the women, and referrals for abuse.

9. All agencies that provide care for pregnant and parenting women should have a directory of resources for referrals for women who have been identified as victims of abuse.

10. With the growth of Medicaid managed care in Maryland, it is crucial that managed care organizations work collaboratively with local health departments to offer ancillary services to high risk pregnant women as part of comprehensive prenatal care.

11. It is also important to expand provider knowledge about the role of comprehensive prenatal care for high risk populations through continuing education and medical school/resident training programs.

12. Managed care organizations should strongly consider incorporating the components of comprehensive prenatal care into existing prenatal care guidelines to be used by providers within their networks.

Recommendation #3:
Improve community-based services that address broad issues in high risk communities like Baltimore and Prince George's County.

Action Steps

1. The Maryland Department of Health and Mental Hygiene and the Maryland Commission on Infant Mortality Prevention should work with (a) Healthy Start to develop mechanisms by which public-private partnerships can provide sustaining dollars to continue the Healthy Start initiative in Baltimore City, and (b) create a funded improved pregnancy outcome strategy for Prince George's county.

2. Healthy Start, in conjunction with the Department of Health and Mental Hygiene, should complete its fiscal analysis of the cost-savings of the program to the State, and provide its findings to the Maryland Commission on Infant Mortality Prevention.

3. The findings of the Healthy Start evaluation should be shared with to the Health Department, Department of Social Services, Local Management Board in each jurisdiction and the private sector to encourage local jurisdictions to develop programs similar to Healthy Start in Baltimore City.

4. The managed care organizations in Maryland serving the Medicaid population should contract for Healthy Start or similar comprehensive services for their prenatal enrollees as a means of ensuring the best possible birth outcomes.

Recommendation 4a:
To reduce the African-American/White gap in infant mortality, it will be necessary to strengthen regionalized perinatal systems that assure that all women in need of high risk care for medical complications have access to this care and improve the survival of low birth weight infants.

Recommendation #4b:
In order to reduce the African-American/White gap in infant mortality, it will be necessary to assure that women in need of high risk care for psychosocial or social problems have access to this care.

Action Steps:

1. The Maryland Department of Health & Mental Hygiene, the Maryland Commission on Infant Mortality Prevention and the MHA: The Association of Maryland Hospitals and Health Systems should continue its efforts to develop standards for monitoring the provision of maternity and newborn care in hospitals across the State and strengthening the efforts began under the Crenshaw Initiative.

2. The Medicaid program should ensure that all Medicaid managed care plans for women of childbearing age and their infants include contracts that provide for timely acquisition of high risk care through the regionalized networks.

3. The Maryland Department of Health & Mental Hygiene should continue its efforts to develop public-private partnerships for the delivery of services to mothers and infants.

4. The State's Insurance Commission should work with tertiary care centers in and out of state to provide reimbursement for the provision of high risk maternity care to perinatalogists in unserved areas throughout the State.

Information is available in alternative formats by calling or writing:
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Maryland Commission on Infant Mortality Prevention
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Baltimore, Maryland 21201
(410) 767-4160
Maryland Relay Number 1-800-735-2258